Diaphragm seal for general application
flange-type per DIN EN and ASME, Type Series DA . . . .

Features

- Flush-mounted separating diaphragm of stainless steel, welded by laser
- Volume optimized diaphragm base
- Connection of measuring instrument:
  · directly welded
  · directly screwed
  · with temperature decoupler
  · with capillary

Options

- Material certificate acc. to DIN EN 10204-3.1
- With reduced temperature effect and reinforced diaphragm (LTC-technology)
- Special materials upon request
- Connection to zone 0 with flame arrester

Application area

· Chemicals
· Pharmaceuticals
· Food industry

Application

Suitable for mounting to bourdon tube pressure gauges and pressure transmitters. The flange-type diaphragm seal is suited for measuring aggressive, highly viscous media and for high process temperatures.

Technical Data

Process connections
flange connections per DIN and ASME
see order code

Diaphragm seal material
flange: stainless steel
mat. no. 1.4404 (316L)

Sealing surfaces
per
- DIN EN 1092-1
  model B1, B2, C, D, E
- ASME B 16.5, RFSF, RF 125-250 AA, RJF

with special material sealing surface upon request

Nominal pressure/nominal widths
see table

Separating diaphragm
standard material: stainless steel, further materials see order code.

Diaphragm outline
standard Sinus-type, option: with reduced temperature effect and reinforced diaphragm (LTC-technology)

Measuring instrument connection
· directly welded/screwed
· with temperature decoupler
· with capillary
see order code
material stainless steel

Process temperature
dependent on measuring system, diaphragm seal filling liquid and installation.

Temperature influence
Influence of process temperature to meas. system (when pressure transmitter is mounted):
· standard (Sinus-type):
  DN 50: 0.8 mbar/10K
  DN 80: 0.4 mbar/10K
· LTC-technology:
  DN 50: 0.4 mbar/10K
  DN 80: 0.2 mbar/10K

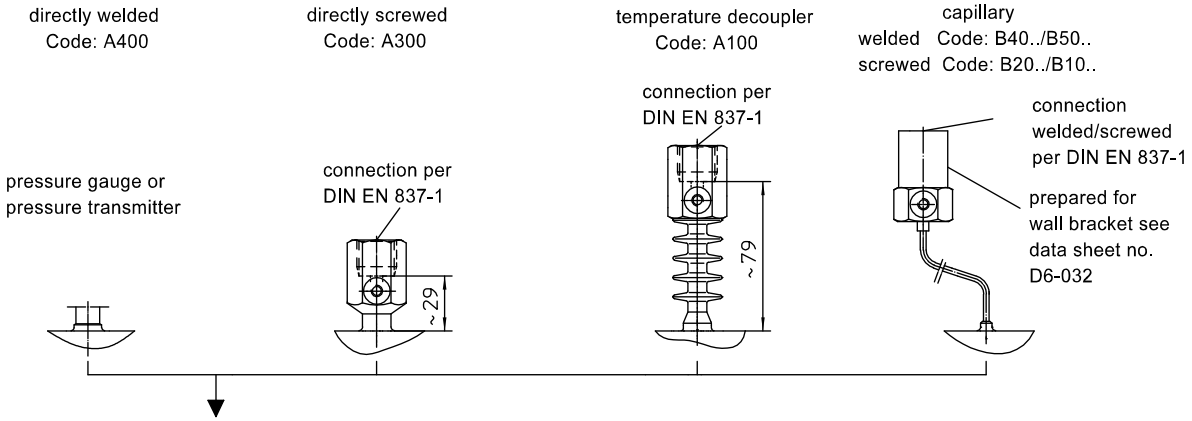
Diaphragm seal filling liquid
see data sheet D5-003.
Standard according to order code

Ex-aproval
connection to Zone 0 with flame arrester
PTB 03 ATEX 4032 X Ex IIG IIC
declaration of conformity:
KE 17060301-03

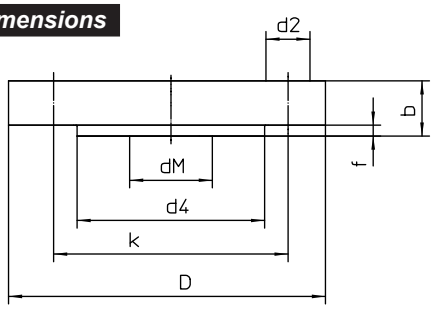
Installation instructions
see operating instructions BTA-062

Weight
with measuring instrument connection G 1/2 see table

Measuring instrument connection



Dimensions



dimensions (mm) ASME

DN	PN psi	D	dM	d4	k	d2	no. of borings	b	f	weigth approx. kg
1"	150	110	30	51	79.4	16	4	18	2	1.3
1"	300	125	30	51	88.9	19	4	18	2	2.5
2"	150	150	51	92	120.7	19	4	20	2	3.2
2"	300	165	51	92	127.0	19	8	22.5	2	4.1
3"	150	190	86	127	152.4	19	4	24	2	5.2
3"	300	210	86	127	168.3	22	8	29	2	5.7
4"	150	230	86	158	190.5	19	8	24	2	7.0
4"	300	255	86	158	200.0	22	8	32	2	11.0

dimensions (mm) DIN EN 1092-1

DN	PN	D	dM	d4	k	d2	no. of borings	b	f	weigth approx. kg
25	10/40	115	27	68	85	14	4	18	2	1.5
25	63/100	140	27	68	100	18	4	24	2	2.0
50	10/40	165	51	102	125	18	4	20	2	3.2
50	63	180	51	102	135	22	4	26	2	4.1
80	10/40	200	86	138	160	18	8	24	2	5.0
100	10/16	220	86	158	180	18	8	20	2	6.0
100	25/40	235	86	162	190	22	8	24	2	10.0
125	10/16	250	86	188	210	18	4	22	2	10.0
125	25/40	270	86	188	220	26	8	26	2	11.0

Order Details - please give additional specifications for models not listed -

Diaphragm seal for general application flange-type per DIN EN and ASME									
design per DIN	sealing surface	(new standard) DIN EN 1092-1	(old standard) DIN 2526						
		· model B1	· DIN 2526, model C/D				**DA1 . . .**		
		· model B2 [1]	· DIN 2526, model E [1]				**DA2 . . .**		
		· model C	· DIN 2512, model F				**DA4 . . .**		
		· model D	· DIN 2512, model N				**DA3 . . .**		
		· model E	· DIN 2513, model V13				**DA7 . . .**		
	nominal width	· DN 25, PN 10-40					**12 .**		
		· DN 25, PN 63-100					**15 .**		
		· DN 50, PN 10-40					**42 .**		
		· DN 50, PN 63					**43 .**		
		· DN 80, PN 10-40					**62 .**		
		· DN 100, PN 10-16					**71 .**		
		· DN 100, PN 25-40					**72 .**		
		· DN 125, PN 10-16					**81 .**		
		· DN 125, PN 25-40					**82 .**		
design per ASME	sealing surface	· ASME B16.5 RFSF [1]					**DA5 . . .**		
		· ASME B16.5 RF125-250 AA					**DA51 . .**		
		· ASME B16.5 RJF					**DA6 . . .**		
	nominal width	· DN 1", PN 150 psi					**11 .**		
		· DN 1", PN 300 psi					**12 .**		
		· DN 2", PN 150 psi					**31 .**		
		· DN 2", PN 300 psi					**32 .**		
		· DN 3", PN 150 psi					**51 .**		
		· DN 3", PN 300 psi					**52 .**		
		· DN 4", PN 150 psi					**61 .**		
		· DN 4", PN 300 psi					**62 .**		
design	· standard						**0**		
	· zone 0						**2**		
connection of measuring instrument	· directly	· welded						**A400 .**	
		· screwed G 1/2						**A300 .**	
	· with temperature decoupler A100		· screwed G 1/2					**A100 .**	
	· with capillary		· welded					**B40 . .**	
			· screwed G 1/2					**B20 . .**	
	· with capillary and stainless steel protective tube		· welded					**B50 . .**	
			· screwed G 1/2					**B10 . .**	
material wetted parts	· stainless steel mat.-no. 1.4404/1.4435 (316 L), standard							**1**	
	· stainless steel mat.-no. 1.4435/1.4435 (316 L), LTC membrane technology [4]							**1L**	
	· stainless steel mat.-no. 1.4435 (315L)							**7**	
	· Tantalum							**2**	
	· Hastelloy C276							**3**	
	· Hastelloy C4							**8**	
system filling[2]	filling liquid		temperature range[3]						
	· silicon oil FS 20, standard		-10...+140 °C					**L20**	
	· silicon oil FS 20, high temperature range, max.		-40...+200 °C					**L11**	
	· vacuum oil FV 1		-40...+280 °C					**L18**	
	· high temperature oil		-10...+400 °C					**L31**	

capillary length	
length m	**order-code**
1	**11**
1.6	**12**
2.5	**13**
4	**14**
5	**21**
6	**15**
7	**23**
8	**16**
10	**17**
others	**9**

additional features (to be indicated in case of need, only)

material certificate acc. to DIN EN 10204-3.1, wetted parts	**W1020**

Order code (example):	**DA1420**	**A4001**	**L20**	

[1] necessary with special materials
[2] Please check data sheet D5-003 for further information.
Please state temperature range to allow an accurate calculation of the system.
[3] max. temperature of liquid filling for abs. pressure > 1 bar
[4] for DN 50 and DN 80